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Cross-Sectoral Issues

Education, Training, and Awareness for Sustainable Development

Report of the Secretary-General of the Conference

I. INTRODUCTION

1. United Nations General Assembly resolution 44/228 set as one of the objectives of the Conference the need "to promote environmental education, especially of the younger generation as well as other measures to increase awareness of the value of the environment." References were made to this issue in several decisions of the Preparatory Committee. 1/. The Secretary-General's progress report A/CONF.151/PC/21 2/ reviewed the present status of environmental and development education and public awareness and identified several potential action areas.

2. The present report has drawn on the important guidance provided by delegations at the Second Session of the Preparatory Committee. Contributions were sought from a large variety of sources - United Nations agencies and bodies, international and non- governmental organizations and individual experts. More specific suggestions on education and training related to sectoral issues of the UNCED agenda are to be found in other reports prepared for this session of the preparatory Committee.

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II. ENVIRONMENT, DEVELOPMENT AND EDUCATION - THE PROBLEM AND THE CHALLENGE

3. Education is a process which begins at birth and is on-going throughout life. The formalized education system is the social institution entrusted with the main responsibility for passing on to succeeding generations the wisdom, knowledge and experience gained from the past. It represents a guided path which helps individuals to understand their own societies and to take their place in them. It equips people for meeting contemporary needs.

4. There are, however, less guided influences which are a powerful 'hidden curriculum'. These include the very circumstances into which one is born - physical, social, financial; the influence of parents and peer groups; the general mores of the society, nurtured by powerful media impacts, especially television sometimes encouraging a departure from traditional lifestyles, to wasteful lifestyles of the affluent.

5. Unsustainable production and consumption patterns leading to environmental degradation, growth of populations beyond the capacities of systems to maintain them, colonial and post- colonial exploitation, urbanisation, warfare of increasingly sophisticated forms, cultural penetration, are all having their destructive effect on behaviour, and increase stress in society.

6. Formal education has been useful as a stabilising influence, but increasingly it has become compartmentalised into academic disciplines, insulated from each other by their own outlooks, languages and methodologies. Their linkages with environmental problems and modes of economic behaviour became blurred. The very nature of formal education presents a problem. It reflects the status quo. In the relatively stable economic and technological climate of the past its function did not lead to disharmony. This has changed, and the dilemma is how to balance mandates for change with the need for continuity. Education now has to perform new roles: contributing to innovative management and research, and new blood for entrepreneurship; providing the stable general and vocational foundation of skills and competencies, opportunities for further education and retraining, to make up for deficiencies in qualifications; providing the trained, adaptable and flexible labour force especially in regions hit by structural change and unemployment.

7. The role of education as perhaps the single most important factor in promoting economic growth and raising the quality of life for mankind is broadly acknowledged. Education programmes should be reoriented towards inculcating in people the desire to learn, facilitating and supporting the processes of learning and providing knowledge and skills that produce jobs and increase productivity - an essential tool for sustainable development. The case for investing in human resources has been convincingly put forward in the UNDP Human Development Report, 1991. 3/ Education can be an active contributor to solutions in many problem areas facing governments. In particular, education can make its intrinsic link with environment a much more positive partnership. If teaching strategies are geared not only to transmit knowledge, but more importantly (a) to develop intellectual problem solving skills and

(b) to inculcate specific attitudes and values, then general education would already have put in place the basis for appreciating and conforming to, at the individual level, the concept of sustainable development.

8. This kind of approach to teaching is becoming increasingly necessary; as available knowledge widens, individuals need to be taught how to avail themselves of information and use it continuously. This will help to ensure that basic education fulfils its function as a requirement for the minimum standard of life quality desired. Such a minimum is necessary before individuals can even begin to think of life in terms of environment and development, rather than in terms of survival at all cost. The public must have at least basic education, to make informed choices, a message strongly endorsed by the 1990 World Conference on Education for all, basic education will be increasingly linked with science and technology, and with masses of new data, quickly communicated and critically appraised.

9. There is a sense of helplessness that many people now feel in the face of issues so vast and complex, commanded by powers so far beyond their reach. To tackle this we might adopt new approaches, e.g. of education for achievement (familiar in business education) which foster each individual's critical appraisal of personal performance, sub-dividing the work into attainable outcomes, emphasising positive attitudes and putting expectation into action.

10. The education of women is especially important. Firstly, they are most often our children's first teachers and can thus instil from an early age desirable attitudes to environmental management. Secondly, their education appears to be a consistently powerful factor in reducing birth rates, and concomitantly child mortality rates. In the final analysis this means better child care, slower population growth, less poverty, and less pressure on the environment.

11. Although basic education is a priority goal, comprehensive policies must still include improved higher education, access to scientific research and technology and professional training, if countries are to be competitive and grow economically. However, care should be taken not to make assumptions about developing countries, especially in the use of new technologies. While computerisation of services might be suitable in a rich country, selectivity has to be exercised in such use of computers in many developing countries. In regions where the printed word may not be easily available, funds are better allocated to simple, yet effective teaching materials in the hands of competent teachers, and better spent on support systems and materials and on human resource development.

12. Dialogue is needed among several partners - providers of education, the related public authorities and the social partners. It would clarify perspectives and specific responsibilities; allow for teacher education and curriculum change and for the support systems, especially financial, to reach agreed targets and goals. Teachers and their commitment and skill thus constitute a crucial part of the equation for success. It is this more highly educated and trained group that will provide the personnel with the general

background and interest to embrace environmental specialities, and to appreciate and understand more deeply complex environment and development issues.

13. The achievement of education goals pre-supposes well educated leadership, with the vision and intellectual skills to evaluate situations holistically, and make informed decisions. Thus there is an urgent need for a research and data base which could support the formulation of national strategies for education.

14. Education is an enabling, empowering process which lifts the quality of life - whatever one's circumstances. It is the renewed recognition of this enabling capacity that has prompted the re-examination of the education dimension in a world where, increasingly, change is the order of the day.

III. RECENT INTERNATIONAL DEVELOPMENTS IN EDUCATION

15. Over the past three or four years, several international fora have been convened for the express purpose of discussing educational issues, though with different emphases:

(a) The August 1987 Congress on Environmental Education and Training, held in Moscow, organized by UNESCO and UNEP; 4/

(b) the March 1988 Intergovernmental Conference held in Paris on Education and the Economy in a Changing Society, organized by OECD; 5/

(c) the March 1990 World Conference on Education for All, held at Jomtien, Thailand, convened jointly by UNDP, UNESCO, UNICEF and the World Bank, 6/ and its Round Table on Environmental Education as a component of Sustainable Development;

(d) the September 1990 World Summit for Children held at United Nations Headquarters, New York, organized by the United Nations Children's Fund (UNICEF). 7/

The need for improved education and training was also stressed at recent intergovernmental regional conferences, convened in support of preparations for UNCED.

16. The World Summit for Children, and the Jomtien Conference were important in enunciating several goals for basic education for the year 2000.

(a) Expansion of early childhood development activities, including appropriate low-cost family - and community-based interventions;

(b) Universal access to basic education, and achievement of primary education by at least 80 per cent of primary school-age children through formal schooling or non-formal education of learning standard, with emphasis on reducing the current disparities between boys and girls;

(c) Reduction of the adult illiteracy rate (the appropriate age group to be determined in each country) to at least half its 1990 level, with emphasis on female literacy;

(d) Increased acquisition by individuals and families of the knowledge, skills and values required for better living and sustainable development, made available through all educational channels, including the mass media, other forms of modern and traditional communication and social action, with effectiveness measured in terms of behavioural change.

17. The principles of environmental education as formulated by the UNESCO/UNEP International Environmental Education Programme (IEEP) and given international approval at the conferences at Tbilisi (1977) 8/ and Moscow (1987) provide the basis for goals towards which UNCED could direct education and training :

- to foster clear awareness of, and concern about, economic, social, political and ecological interdependence in urban and rural areas;

- to provide every person with opportunities to acquire the knowledge, values, attitudes and skills needed to protect and improve the environment and to achieve the goals of sustainable development;

- to create new patterns of behaviour and ethical responsibilities of individuals, groups and society as a whole towards the environment.

IV. OPTIONS FOR AGENDA-21

18. Several possible programmes for the consideration of the 1992 Conference are set out below. Their overall objective is to achieve environmental and development literacy and ethical responsibility through education on a world-wide scale by the year 2000, as the requirement for an environmentally competent earth citizenry. The programme options to meet this objective are the following:

(a) strengthen the role of education in society in its widest sense for achieving sustainable development;

(b) reorient formal education towards environment and development;

(c) improve education and training within development programmes;

(d) facilitate access to information and improve its communication and impact;

(e) strengthen community participation and partnership;

(f) improve the supportive role of the international system.

These optional programmes are now described in detail:

A. Strengthen the role of education in its widest sense for achieving sustainable development.

19. All governments might wish to affirm or reaffirm their adherence to the World Declaration on Education for All of the Jomtien Conference and to its Framework for Action. That would encompass meeting basic learning needs, expanding the vision of education, universalising access and promoting equity, focusing on acquisition of learning, broadening the means and scope of education, enhancing the environment of learning, strengthening partnerships, developing a supporting policy context, mobilising resources to provide for a broader scope of action and strengthening international solidarity to redress existing economic disparities which interfere with these aims.

20. Governments could take appropriate steps to ensure access to, and improve the quality of, education for girls and women. As a key indicator of human development universal primary education of all children, male and female,could be reached by the year 2000, by which time environmental education should be part of basic learning.

21. Environmental education needs to be recognised by all as an essential part of basic learning. Environmental competence could become as central an objective of education as personal or social competence. For children education might start from a state of positive environmental health, where problems can be identified as injuries or sickness requiring remedy. It should constitute a life-long experience, in-school and out-of-school, encompassing all sorts and levels of education and reaching every citizen Steps could be taken at international and national levels to coordinate it with other interdisciplinary education programmes, dealing e.g. with health, population, poverty and peace.

22. UNESCO and UNEP through the IEEP could set up as a matter of urgency a programme to integrate fully the principles governing sustainable development to be identified by UNCED into the existing framework of environmental education, This programme will require support within and outside the United Nations. It will need much further research to establish, for example, how the complex ecological, economic, political, social, psychological and ethical systems can be reconciled in a single systemic approach and adapted to the needs of educators at different levels in widely contrasting circumstances. In addition regional organizations and national authorities could undertake parallel integrative programmes adapted to the particular characteristics of their own areas and education systems. These programmes might be accomplished within 3 to 5 years.

23. Each country within the next three years could prepare a National strategy for environmental and development education.It would set out existing policies, propose measures in fulfilment of the international goals, outline means and time-frames of implementation, monitoring and evaluation. The strategy would be costed and specific needs identified. With the International Strategy on Environmental Education and Training for the 1990's (Moscow 1997) providing a starting point support may be organized for

developing countries through the UNESCO/UNEP/IEEP, with models elaborated for different regions. Each country could set up a national coordinating body representative of the whole range of environmental, developmental and educational interests to prepare such a strategy based on a set of shared principles. This body would act and advise on implementation, establish a central source of information, encourage partnerships, help to mobilise resources and provide a focal point for international ties.

B. Reorient formal education towards environment and development

24. National education agencies could undertake a thorough review of the school curriculum designed to ensure that a co- ordinated programme of environmental and development education becomes an essential and examinable part of the education of every student throughout the school career. Specific environment and development issues need to be incorporated in the curriculum. Some programmes are already developing which could serve as models for others. The new primary school programmes "Alam dan Manusia" in Malaysia, described at the WCEFA Round Table on Environmental Education (1990), 9/ is an integration of science and social science components, set in the context of a new curricular philosophy. Educational administrators and employers could provide incentives for student achievement by raising the status of environment and development learning as a necessary qualification for further advancement.

25. National governments and their agencies could be urged to institute as a high priority and as part of their national strategy pre-service and in-service training programmes for all teachers, teacher trainers and school administrators in the nature and methods of environment and development education, backed by a programme of updating courses at reasonable intervals.

26. Regional organizations and national curriculum development agencies could put special effort into the production of methodologies, learning materials and resources suited to the new requirements and to their own conditions, undertaking adaptation of materials from elsewhere if they are suitable. Contact with out-of-school agencies could be fostered as means of productive school involvement in public affairs where students are not only learners but effective educators (e.g. as in the "Magic Eyes" programme in Thailand reported to the WCEFA Round Table and many others). Their potential to give a public lead in local pollution control, hygiene, waste management and other areas is considerable.

27. Universities and colleges could adhere to the principles of the Talloires Declaration (October 1990) 10/ of university presidents, in support of environmental policies in their institutions. The tertiary sector of education has a special place as arbiter of quality, guarantor of status, generator of research and as prime source of education and training of decision makers, administrators, and environmental interveners in many fields. Progress in this sector calls for an increased proportion of cross-disciplinary programmes of scholarship; research and teaching in support of high standards of environmental quality and fitness; collaboration with other bodies in the field both at home and abroad, with special emphasis on links between industrialized and developing countries; the inclusion of interdisciplinary balancing topics to provide a holistic view of human/environmental systems, in

all courses leading to employment involving environmental intervention (e.g. civil engineers, planners, architects, economists, lawyers, medical, veterinary and public health workers, administrators in business or government) as well as in courses both intra- and extra-mural. For students in courses leading to work in administration and business a much stronger science component is needed. To support these policies interdisciplinary units could be set up to promote joint research and special courses. Campus companies and joint programmes with industry should help to promote high standards of practice in the development field. In developing countries universities might give special attention to the education and training of middle managers and to the practical and vocational applications of tertiary studies, to reduce graduate unemployment and orient graduates towards becoming producers, as recommended by the second United Nations Conference on the Least Developed Countries (Paris, 1990). 11/

28. Regional or national authorities could establish at least one university or other institution as a centre of excellence in environmental and development education (the International Academy of the Environment in Geneva is a recent example). To provide an academic back-up for education in this field at international level UNEP has proposed to set up a World Environment Academy. Its Governing Council, at its sixteenth session, realized that this proposal should be considered within the context of discussion on legal and institutional issues which is taking place in the UNCED Preparatory Committee. Such centres would in cooperation with IEEP promote innovation in course development, methodologies and evaluative and other techniques; lead research in the field; take part in the interpretation and dissemination of up-to-date information and research in a comprehensible form to information networks and potential users, play a leading role, in the provision of assistance learning programmes for environmental and development education and training of environmental managers and provide the central services that might be required by a regional or national coordinating body.

C. Improve education and training within development programmes

29. All the agencies responsible for a development programme could adopt a holistic approach to its planning and management. The final declaration of the 2nd World Industry Conference on Environmental Management (Rotterdam 1991) 12/ identifies a common goal between good environment and good business and between economic development and environmental protection. In practice these processes are often highly technical and may lead to over-specialization with consequent failure to see programmes as a whole. A holistic approach would involve employers and workers and their organizations in e.g. drafting relevant legislation, providing a clearing house regarding choice of environmental technologies, maintaining a network for exchange of environmental information and training programmes' for employees and their organisations in measures affecting employment, health and safety. Thus development becomes a genuine learning experience for all affected by it.

30. Governments, through identified focal points, could ensure that all sectors of society, but particulary industry include an environmental management component in all relevant training. This would aim at building the capacity of people in government, industry, management and work force whose activities strongly influence the physico-chemical and human environment.

Training need not be long-term, and could be designed to meet current needs relatively quickly, particulary for practitioners implementing intermediate strategies in environmental management. The ILO environmental training and support activities for employers and workers' organizations, UNESCO, UNEP, FAO, UNDP, WHO, UNITAR, IUCN and others' training programmes and courses in resource management, would benefit from further extension and wider accessibility. Aid agencies could strengthen the training component of all development projects so as to ensure that environmental and development issues provide a major part of project-related training. UNDP's Environmental Management Guidelines for the operational activities of the United Nations system currently reviewed by all United Nations agencies, may contribute to this end. The capacity, especially of developing countries to deal with global threats, e.g. as climatic changes, could be greatly strengthened, as stressed by the 2nd World Climate Conference. The establishment of centres for training and research on energy efficiency and renewable energy in major developing country regions, as suggested by the World Resources Institute, might meet a pressing need.

31. The initiative of the International Chamber of Commerce, in cooperation with UNEP and UNCED and with the support of the ECE and the Commission of the European Communities, in launching the Industry Initiative on Environmental Education (Rotterdam 1991) could be favourably examined. The creation of Regional Development Centres, "senior mentor programmes" and other measures have also been proposed on behalf of the International Federation of Consulting Engineers (FIDIC) 13/ to facilitate transfer of good practice and to reduce the dependence of poorer countries on costly expatriate staff for environment and development programmes.

D. Facilitate access to information and improve its communication and impact

32. All countries could enact, wherever necessary, legislation to ensure freedom of information on matters essential to maintaining high standards of environmental quality. Several regional Conferences already stressed the right of individuals to be informed and participate in the formulation and implementation of policy concerning environment and development. Elaboration of such legislation could be promoted by UNEP, UNESCO, IUCN and other organizations having environmental legislative experience. This task may be accomplished within this decade. Further, all regional organizations or national governments could provide a public environmental information service, e.g. as in Ireland through a city shop, connected to central computer and library service. Specialized interpretation and dissemination services could be set up, using the coordinative machinery already proposed, such as UNDP's Sustainable Development Network in developing countries.

33. National educational coordinating bodies could analyze the whole range of target audiences and non-specialist user groups, from top decision-makers to the most socially disadvantaged, and inventory their needs and the means by which they can be effectively approached, including advance communications. UNESCO and UNEP might be invited to conduct such an analysis globally. Sound environmental care cannot wait for universal literacy, and all means appropriate to local culture of channelling information are needed, including those available to religious leaders, the use of adult literacy programmes, of

agricultural extension systems, and traditional methods such as story-telling, song and dance. Staff training, materials and other support may be provided by IEEP. High priority might be given to effective and rapid communication of scientific information to decision-makers. This is essential, if they and other critical actors for sustainable development are to benefit from the current knowledge, which is increasingly scientific and technical, but has to be presented in a non-sectoral policy perspective.

34. The United Nations system at international level, regional organizations and national governments could set up constructive discussions with media, and entertainment and advertising industries to explore the part which they currently play, and how they might further enhance public awareness and understanding of environmental and development issues. The media might now progress from being competitors for public attention to partners in moulding sound environmental practices and behaviours, and be challenged to draw up their own agenda for doing so. The vital role of TV and radio in distance learning, especially in rural areas is one avenue worth exploring. Environmental TV spots, produced in Germany for Africa, is one example. The success in some countries of broadsheets, newspaper inserts as children's comics on environmental themes (in some of which international bodies including UNICEF and UNEP are involved) could be extended. IEEP might enrich the preservice curriculum of journalists with environment and development topics.

35. The United Nations could, within five years, establish an educational network (in the widest sense) centred on an international clearing house of information, technologies and resources relevant to environmental and development education and training. It would improve the availability of a great variety of databases, case-studies, and other sources of expertise which is already in existence, much of it unknown to people who might use it, and located in a great range of places around the world. This could be done in collaboration with Regional Development Banks and regional United Nations Commissions, with support of UNDP's Resident Representatives, United Nations Information Centres, international NGO's, and national information centres. A distinction might be drawn between those who could pay for the service and those who could not, so as to maximize its availability to users in poorer countries. An initial regional clearing house in Europe may well serve as a model.

E. Strengthen community participation and partnership

36. Local community participation in the planning and management of their own environment could be improved as a valuable channel for education and training. Treatment of many of the issues of this Conference - land degradation and biodiversity for example - are largely and rightly in the hands of local people. Community involvement may save a lot of money, as well as build a committed constituency in support of improved resource management practices. Successful environmental education should increase the sense of issue-ownership and of empowerment.

37. Governments might be urged to affirm the right of indigenous people, by legislation if necessary, to use their understanding of the environmental determinants of lifestyle to participate in decision-making regarding

development programmes and play a part in education and training related to them. The failure of imported administrators and "experts" to consult local opinion has sometimes resulted in expensive mistakes, where knowledge and experience already available and passed on through oral traditions was not properly taken into reckoning. Education and training, here as elsewhere, must be a two-way learning experience. Old ways, now disappearing from memory, could sometimes be the means of rescue for people become suddenly beleaguered. The preservation of traditional knowledge and skills, (e.g. land cultivation, medicinal plants) might be given high status. The NGO sector might facilitate such efforts.

38. National governments and NGO's could institute or develop a service of locally based and recruited environmental technicians. They would be able to identify the key concerns in the locality, and trained in methods to optimise sustainable resource use and promote good practice, in legal and administrative frameworks and environmental management tools, and in methods of education and communication. They could be provided with equipment and means of access to centres of information and advice. Such a service should be available to deprived urban and rural areas, e.g. through local learning centres where trained staff, drawn from the community, can bridge the gaps between local people and the many services they need. In rural areas, a parallel can be drawn between the provisions adopted for primary health care and what might be done for primary environmental care.

39. Relevant United Nations agencies, regional and national authorities could encourage or support field experience and collaborative programmes, such as student exchange, staff secondment to the field, "shadowing" projects, work programmes like the United Nations Volunteers UNDP's Youth Environment Corps and the Earth Restoration Corps. 14/ Being a means of enhancing international and intercommunity understanding, they will promote valuable learning in both directions.

40. Governments could give the relevant NGOs encouragement and assistance where necessary, in facilities, materials, training and funding, and help in access to, and constructive interchange with, the formal education system, through the national coordinating body and by other means. Extending this exchange to the international level the United Nations system, through the IEEP, could encourage the development of an international framework to assist NGOs to make a more concerted input to the achievement of global educational targets. As custodians of local information and of dedicated expertise, through their variety and flexibility, and influence on public environmental attitudes, their commitment and ability to undertake projects which might prove difficult for statutory bodies, the NGO's have a special role to play.

41. Authorities responsible for museums, zoos, botanical gardens, historical sites, national parks and protected areas and comparable resources could be encouraged to make the maximum use of these for the environmental education of the public, by promotion of interpretative facilities, by developing links with the formal sector of education, as well as collaborative programmes, so that complementary resources (e.g. plants and animals) may be interlinked through joint programmes.

42. International, regional organizations and governments could develop constructive discussions with the leisure, recreation and tourist industries to arrive at policies which will reduce their sometimes deleterious effects on ecosystems and communities, and improve their educational potential through better understanding by all of the issues involved, as well as raising support for the improved care of the environmental assets on which they depend. The services of rangers might be strengthened in areas where interaction between visitors, local people and the uncultivated environment is sensitive. The efforts of the World Tourist Organisation and the studies undertaken by UNEP on awareness campaigns for sustainable tourist development could provide a basis for further effort in this field.

43. National and local governments and other agencies concerned could be urged to develop support programmes to involve children and young people in environmental and development issues. As they must occupy a special place in any conference relating to the quality of the future, their involvement could be facilitated e.g. through the decisions of the World Summit for Children (1990), programmes like the "Voice of the Children" pioneered in Norway in the context of the Bergen Conference (1990) and activities of youth groups. UNICEF, UNESCO, UNDP and non-governmental organisations may make a significant contribution in this areas.

F. Improve the supportive role of the international system

44. The United Nations could undertake a comprehensive review of its educational and training activities over the range of issues to be acted upon by UNCED. The objective would be to reassess priorities, co-ordinate policies and resources, ensure a coherent environmental and development education policy and a common set of principles, review channels of communication to outside bodies, critically assess the needs and effectiveness of what is being done, test what is planned and if necessary reallocate resources to achieve maximum efficiency in handling the recommendations of UNCED. Teams of experts from different United Nations agencies could prepare proposals within one or two years. The programmes currently being undertaken through IEEP by various United Nations bodies are already addressing many of the issues raised in this report. There is a need to strengthen and extend these activities and to maintain a monitoring and evaluative role. Information might be gleaned from national reports submitted to UNCED to provide the starting point for a regularly updated register of needs and progress in all countries, to be revised and circulated at regular intervals (e.g. biennial).

45. The 1992 Conference could present, translate and disseminate its own findings in a variety of forms to become as widely known as possible. The United Nations agencies might commence joint programmes with educators soon afterwards to develop and test prototype resources and materials for use at different levels of education and training on each of the key issues of environment and development, with which the Conference has been concerned. UNDP Sustainable Development Network might provide an effective channel. In order to ensure that maximum attention is given to the educational implications of UNCED, and their effective implementation in a continuing

dialogue among educators, industry, scientists and government, support might be given to the World Congress on Environment and Development Education, planned for October 1992 in Toronto, Canada, and sponsored by UNESCO and the International Chamber of Commerce.

46. The United Nations could adopt the principles of a future Earth Charter as guidelines for assessing the appropriateness of educational programmes of sustainable development, working with other organisations including religious on the development of environmental ethics. This may help carry human thought beyond the accepted anthropocentric standards to a balanced and integrated relationship with the biosphere, new patterns of behaviour, respect for diversity and human creativity.

V. FINANCIAL REQUIREMENTS

47. Resources are needed as a matter of urgency to build up the national capacities, especially of less wealthy countries to take up the educational measures proposed above. After nearly 40 years of rapid advance, debt burdens and consequent cuts in spending have, in many developing nations, halted or reversed the gains made towards universal primary education. Nor have some industrialised countries escaped the effects of spending cuts. The remarkable thing about the Jomtien conference was that despite this trend, and other world problems of war, population growth, etc., participants felt very strongly that for the first time in history, the goal of basic education for all was now attainable. The move towards peace among nations; the many scientific and cultural achievements; increasing recognition of women's rights and capacities; the information and communication revolutions, and the lessons to be learned from countries which have progressed towards basic education for all - these factors combine to make this a propitious time for pressing towards the world goal of basic education, which is indeed a cornerstone of all environment and development education.

48. This will require innovative funding approaches and a multifaceted strategy, based on clearly defined needs. One key concept is that of synergies. Education is only one avenue for improving the quality of life. Investments in health and nutrition, means to plan pregnancies and education and training re-enforce each other, so that the sum of the whole is more than that of the parts. Investment in education offers good returns, and ignorance is very costly indeed. Both public and private sectors need to increase greatly their contribution.

49. Primary education needs funding support as a high priority. The cost of achieving universal primary education over the decade of the 1990s was estimated in documents prepared for Jomtien to be an additional $5 billion per year in local and international resources.

50. Strategies for realising the funding needed might include:

(a) Higher priority for education in budget allocations among sectors;

(b) shifts in allocation within existing education budgets in favour of primary education for the many rather than higher education for the few. This would increase efficiency and equity. The key here is asking those benefitting from higher education to pay a larger share of the costs;

(c) placing more responsibility on communities, asking them to provide a larger share of the costs. As one example, the Bangladesh Rural Advancement Committee (BRAC) innovative model has over 100,000 rural children who had been left out of the formal public system, aged 8-10, served in 4000 schools built by the community, and staffed by teachers recruited from the better educated members of the village. Parental responsibility is a critical factor. At very little cost, ($15 per pupil per year in the Bangladesh context) such measures would stem illiteracy, until more conventional primary schooling can be arranged;

(d) using the same facilities in multiple shifts, though this needs to be handled with care to be efficient;

(e) lifting restrictions on private schooling thus allowing input from the private sector and releasing public funds for the poor.

(f) mobilising all existing communications capacity - the mass media, voluntary organisations, the business community - for putting skills and knowledge at the disposal of all families.

(g) obtaining additional funds for education - especially basic and primary education - from the donor community.

(h) increase the flow of funds to NGO's in support of non-formal education.

51. It was suggested at the Jomtien Conference that by restructuring priorities, greater efficiency, cost recovery etc. $3.5 to $4 billion might be obtained. Aid donors would be asked to contribute the shortfall, especially concentrating on the poorest countries, and those with high rates of illiteracy as in sub-Saharan Africa and South Asia.

52. Much more constructive "bridge - building" is needed between industrialized and developing countries, and among the latter, to increase international solidarity to redress existing economic disparities which interfere with educational aims. A recent decision of the Committee of International Development Institutions on the Environment (CIDIE) which pledges itself to take more aggressive steps to help develop governmental capabilities to address sustainable needs, including environmental education, is to be welcomed. An effort by the Regional Development Banks and other principal regional organizations to join in defining the needs in human resources and institutional capacities, and in designing regional sustainable development and technology support systems, will go a long way in expanding educational and training programmes.

Notes

1/ Official Records of General Assembly, Forty-fifth Session, Supplement No. 46 (A/45/46, Annex 1, decisions 1/18, 1/20, para 1 (e), 1/21, para 1 (h), 1/22, para 1 (c) and 1/28, para (e).

2/ Environmental and Development Education and Public Awareness, Progress Report by the Secretary-General (A/CONF.151/PC/21) of 28 January 1991.

3/ Human Development Report 1991, UNDP, New York, Oxford University Press 1991.

4/ International Strategy for Action in the field of Environmental Education and Training for the 1990's as approved by Moscow UNEP/UNESCO Congress, August, 1987.

5/ Issues Paper, Concluding Session: Strategies for Change: Intergovernmental Conference on Education and the Economy in a Changing Society. OECD Paris 1988.

6/ Final Report of the World Conference on Education for All. Jomtien Thailand. Inter-Agency Commission (UNDP, UNESCO, UNICEF, WORLD BANK), 1990.

7/ State of the World's Children 1991, Oxford University Press for UNICEF.

8. Intergovernmental Conference on Environmental Education, Final Report, Organized by UNESCO in cooperation with UNEP, Tbilisi (USSR) 14-26 October 1977.

9/ Final Report of the World Conference on Education for All. Jomtien Thailand. Inter-Agency Commission (UNDP, UNESCO, UNICEF, WORLD BANK), March 1990.

10/ University Presidents for a Sustainable Future, The Talloires Declaration, October 1990.

11/ Paris Declaration and Programme of Action of the Second United Nations Conference on the Least Developed Countries Paris, 3-14 September 1990, A/CONF.147/Misc 9.

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13/ Statement by FIDIC, at Second Session of the Preparatory Committee for UNCED, April 3, 1991

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